

Appl. No. 09/698,970
Amdt. Dated 11/11/2004
Reply to Final Rejection of 07/28/2004

APP 1206

Remarks

In the Final Rejection being responded to the Examiner has rejected claims 1-16 and 18-24, 35 USC 103(a) as being unpatentable over Ishii et al patent 6,434,132 (hereinafter Ishii) in view of Monch et al patent 6,304,745 (hereinafter Monch). Claim 17 has been allowed. In response to the Examiner's Final Rejection applicants propose to cancel claims 2-9, 11-16, 18, and 20-24, to amend claims 1, 10, 19, and 24, and to add new claims 25-28.

In responding to the arguments presented in applicants' Amendment of May 5, 2004, the Examiner has stated that no weight was given to recitations in the preamble of the rejected claims and further that features which applicants had relied on in that prior Amendment were not recited in the rejected claims. Accordingly, in applicants' newly presented independent claim 25 there are the positively recited steps of transmitting an alert request probe signal to determine if at least one node at the second point can reliably receive the alert request probe signal and then, if none of the second nodes at the second point can reliably receive that signal, forming a receive group consisting of at least one of the second nodes and choosing a controlling point node in that receive group.

The Examiner in rejecting the prior claims also indicated that he considered the "control packet" sent in Ishii to be the probe recited in the prior claims. New claim 25 now clearly states the step of transmitting an alert request probe signal "to determine if at least one of the second nodes can reliably receive the alert request probe signal". This clearly establishes that the "probe signal" is not and can not be just a control packet. Nor does the Ishii control packet perform any role in determining whether at least one of the nodes at the second point can reliably receive the transmitted probe signal; measuring interference for the received control packet in Ishii is not what is recited by applicants' new claim 25.

The Examiner relies on the nodes 2a, 2b, 2c, and 2d in Fig. 1 of Ishii to equate to applicants' step of creating a receive group. However, as stated by Ishii at column 2, lines 42-33 "mobile hosts 2a, 2b form a first subnetwork with base host 1a and mobile hosts 2c, 2d form a second subnetwork with base host 1b". What Ishii describes in the paragraph beginning at column 2, line 51, is that if a receive host recognizes that it is interfered with another subnetwork, it sends a channel switchover request to the parent host which searches for a new channel free from interference. This is not a teaching of applicants' invention, as now more precisely recited in new claim 25.

With respect to the step in applicants' invention of "collecting by the controlling point node the communications received by the second nodes in the receive group and combining the collected communications by the controlling point node to create a reliable signal at the second point" the Examiner had stated (referring to applicants' prior claim 6) that "the step of combining is performed through incoherent signal combining (abstract, column 1, line 46-64, and Fig. 1)" Applicants specifically disagree. Ishii, at column 1, lines 41-45, specifically states that the object of the Ishii invention is to provide an arrangement wherein "channels are automatically reassigned." Thus at lines 54-57 "if the mobile host does not receive the control

Appl. No. 09/698,970
Amdt. Dated 11/11/2004
Reply to Final Rejection of 07/28/2004

APP 1206

packet for a predetermined period or detects the interfering signal, it makes a search for a new channel". There is nothing there or in the Abstract, also referred to by the Examiner, that suggests or discloses applicants' step of collecting the communications at the plurality of nodes in a receive group and combining them.

Similarly, there is nothing in Ishii, Monch or other prior art of applicants' invention as further recited in the newly presented dependent claims 26- 28. Claim 26 adds to applicants' inventive combination of parent claim 25 that nodes at the first point also form a group if the first node can not reliably receive the response probe signal from the controlling node, the first node acting as the controller node for that group. Claim 27 adds to claim 25 that the controlling node at the second point causes all of the second nodes in the receive group to transmit the response probe signal to the first node. Claim 28 adds to claim 25 that a message from the second point to the first mobile wireless node at the first point includes each of the nodes in the receive group at the second point transmitting the message to the first mobile wireless node which combines them. None of these aspects of applicants' invention is in any way to be found in the prior art, including Ishii and Monch.

Referring now to applicants' claims 1, 10, and 19, as amended, applicants submit that they also patentably distinguish from the art of record. In applicants' invention, as recited in these claims, reliable communication between first and second points in a wireless network is attained by forming a receive group at a second point and selecting a controlling node from the selected group of nodes at the second point. Each member of the receive group receives signals and messages from the first point and passes a representation thereof to the controlling node, which then combines the representations to create a reliable signal. Claim 1, as amended, further recites transmitting an alert request probe signal from the first node to the plurality of nodes at the second point with the forming of the receive group at the second point being dependent on none of the nodes at the second point being reliably able to receive the alert request signal. Claim 10, dependent on claim 1, further recites the controlling node at the second point transferring a copy of a second communication signal to each node in the group which in turn transmits the second communication signal to the first node with the first node combining the received representations to create a second reliable communication signal. Claim 19 also recites the transmittal of messages between an originating subset at a first point and the group of subsets at the second point, with the group being selected from a list of subsets at the second point, and the transmittal of a message from each member of the group of subsets back to the originating subset, with the messages being combined in the first instance by the controlling subset at the second point and in the second instance by the originating subset.

Ishii is directed at subnetworks that each comprise a parent/base host and several mobile hosts and wherein the mobile hosts can communicate through an assigned channel. Ishii is only concerned with resolving interferences that can occur between assigned channels in adjacent subnetworks. Ishii does not, as in amended claim 1, send an alert request signal and, if it is not reliably received by any node, form a receive group. Nor, as discussed above, does Ishii resolve his problem of interferences by combining by a controlling node the transmitted copies of the signal received by each member of the group. Ishii simply resolves the interference by changing the assigned channel and broadcasts a channel assignment packet to its mobile hosts to inform

Appl. No. 09/698,970
Amdt. Dated 11/11/2004
Reply to Final Rejection of 07/28/2004

APP 1206

them of this switch to this new channel (Ishii column 1, lines 12-28; column 2, lines 51-67; and column 3, line 41 to column 5, line 35).

Ishii has no disclosure, suggestion, or even hint of a controlling node sending a communication signal to each member of the group with each member then transmitting the signal to the first node which combines these received signals to create a reliable communication signal at the first node, as recited in dependent claim 10 and in claim 19, as amended.

Monch's disclosure and teaching are also remote from applicants' invention. Monch is directed at methods for a calling station to create a radio chain of radio links between itself and a called station. According to Monch, each radio station in a network maintains a list of stations to which it has a direct radio link. A calling station needing to reach a called station combines the different lists to create a single list and then uses this combined list to determine a radio chain to the called station (Monch column 1, line 60 to column 2, line 25 and column 4, line 53 to column 5, line 18). Such disclosure and teaching have nothing to do with applicants' invention, as recited in the claims now being presented. Applicants' claim 10 does recite the step of "creating a list by each subset at said second point", but that list is entirely different from the list of radio stations disclosed by Monch. Monch simply teaches stations each transferring a different list to a calling station and this calling station combining these lists into one long list. This has nothing to do with applicants' invention.

Accordingly, applicants submit that newly presented claims 25-28 and claims 1, 10, and 19, as amended, are clearly allowable for the reasons set forth above. Favorable consideration and allowance of new claims 25-28, and reconsideration and allowance of claims 1, 10, and 19, as amended, are therefore requested.

Applicants therefore respectfully request that this application be allowed and passed to issue. However, if the Examiner deems it would in any way expedite the prosecution of the application, the Examiner is invited to telephone applicants' attorney at the number set forth below.

Respectfully submitted,

Joseph C. Liberti et al

By 

James W. Falk
Attorney for Applicants
Reg. No. 16,154
(732) 699-4465